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UTAH PUBLIC  
SERVICE COMMISSION

May 19, 1994

Public Service Commission

**TO: DSR COST RECOVERY COLLABORATIVE  
Active and Informational Members**

**RE: April 27, 1994 Meeting**

Enclosed is a copy of the Minutes from the Demand Side Resources Cost Recovery Collaborative Meeting held April 27, 1994, together with Attachments 1-6.

The next Collaborative meeting will be held at 1:30 p.m. on Wednesday, May 25, 1994, in Conference Room 863, Eighth Floor, One Utah Center. Enclosed is an Agenda for that meeting. If you have any questions, please let me know.

Sincerely,

A handwritten signature in black ink, appearing to read "Steve McDougal", written in a cursive style.

Steve McDougal

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Enclosures

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# **DSR COST RECOVERY COLLABORATIVE**

## **May 25, 1994 AGENDA**

The next meeting of the Utah DSR Cost Recovery Collaborative is scheduled for 1:30 p.m. on Wednesday, May 25, 1994 in Conference Room 863, 8th floor of the One Utah Center.

### **OLD BUSINESS**

All previous items have been closed.

### **NEW BUSINESS**

5.25.1 Evaluation and Net Lost Revenue ("NLR") Subcommittee Report

5.25.2 Rate Spread and Non-Participant Impacts Subcommittee Report

5.25.3 Shared Savings & Total Factor Productivity Subcommittee Report

5.25.4 DSR Performance Standards Subcommittee Report

5.25.5 Statistical Recoupling Subcommittee Report

5.25.6 Other Business

# DSR COST RECOVERY COLLABORATIVE

## Minutes of April 27, 1994 Meeting

The DSR Cost Recovery Collaborative ("DSRCRC") met in Conference Room 863, 8th floor of the One Utah Center. *Attachment 1* is a list of those who attended the meeting. The next meeting is scheduled for 1:30 p.m. on Wednesday, May 25, 1994 in the same location.

The June meeting will be changed to 1:30 p.m. on June 29, the fifth instead of the fourth Wednesday. This change will also effect the statistical recoupling subcommittee meeting which will be changed to June 28, and the NLR subcommittee meeting which will be changed to the morning of June 29.

### OLD BUSINESS

All previous items have been closed.

### NEW BUSINESS

#### 4.27.1 Evaluation and Net Lost Revenue ("NLR") Subcommittee Report

Bob Lively passed out minutes of the March 23, 1994 NLR subcommittee meeting (See *Attachment 2*). The NLR subcommittee meeting held earlier in the day was also discussed, but minutes for that meeting are not yet available.

The annualized 1994 MWh savings through the end of March is 3,550 MWh, which is below target for meeting the 1994 annual goal of 40,000 MWh. In the April 27 NLR subcommittee meeting Scott Robinson went over the DSR activity report for the first quarter of 1994, and explained the reasons for the low amount of savings. There are currently a lot of projects in the pipeline and he expects PacifiCorp to exceed the 40,000 MWh target for 1994. Part of the reason for the low reported MWh savings in the first quarter is the introduction of more stringent project reporting requirements. An example is that starting in 1994 commercial DSR programs are not included until the ESc is attached (customer has begun making ESc payments) and 90% of the measures have been installed.

The Schedule 5 survey has been mailed out. Approximately 1200 of the surveys have been returned, out of approximately 5500 mailed out. The survey results are being analyzed and will be available in a couple of months.

In the March 23 NLR meeting the sensitivities of the NLR formula to changes in avoided cost amounts were discussed, with sample changes being shown. The avoided energy cost seems to be the most sensitive input into the NLR formula. Ken Powell would like to know the elasticities of the parts of the formula reviewed.

The subcommittee will be recommending two sizes of incentives. The first will be an incentive level which would be appropriate if the PSC wants to reward PacifiCorp in addition to allowing the opportunity for full DSR cost recovery. The second would be the incentive necessary to allow PacifiCorp full cost recovery if they are not allowed the opportunity for full cost recovery through other methods. The subcommittee has

then no incentive will be necessary. Minutes of the April 15 meeting were handed out (See *Attachment 5*). The next meeting will be on May 12. The subcommittee has agreed that if PacifiCorp has an opportunity to recover DSM costs and receive a fair return on their DSR investments

#### 4.27.3 Shared Savings & Total Factor Productivity Subcommittee Report

An alternative method discussed was using the RIM test as a threshold, allocating the amount below the RIM test to all customers, and the amount in excess of the RIM test to the specific customer classes. This possibility is being examined by the subcommittee.

The subcommittee looked at how DSM costs are allocated in other states. They identified three approaches to allocating DSR costs which are discussed in the attached minutes. They compared the approaches for ease of administration, cost causation, price signals, etc. Their analysis of the advantages and disadvantages of each approach is also included in the attached minutes.

The Rate Spread subcommittee met on April 21, 1994. A copy of the minutes is included as *Attachment 3*.

#### 4.27.2 Rate Spread and Non-Participant Impacts Subcommittee Report

The ECONS evaluation is almost complete and will be presented at a special meeting of the NLR subcommittee on May 10 at 10:00. ECONS is currently treating approximately 1000 units per month, with an estimated total potential of 12,000 in the Salt Lake area.

The consultant contract with Xenergy was mailed to Dan Violette to execute the contract. Dan will be at the next NLR subcommittee meeting to review PacifiCorp's evaluation plans. Pete Catching will be mailing out PacifiCorp's evaluation plans to members of the NLR subcommittee within the next week.

In the NLR meeting earlier in the day, a report of kWh savings by program by site by measure was provided. In addition, PacifiCorp had Roger Weaver attend the meeting to talk about avoided costs. Details of Roger's discussion will be in the NLR meeting minutes passed out at the May 25th Collaborative meeting.

decided to concentrate on the shared savings incentive method, and is starting to prepare some parts of it's report.

The Total Factor Productivity ("TFP") incentive method was then discussed. Ken Powell gave a brief background on the TFP method. In the early 1980's a grant was received based on PURPA to develop efficiency methods. The TFP incentive was Utah's efficiency method. TFP divided the Company's costs into 4 categories, 2 of them expense and 2 of them capital. The net of the 4 categories was compared to the predicted amount, and if the Company efficiency exceeded the predicted amount by greater than 5% then the shareholders were allowed to share in the benefits. Energy costs were not included in the four categories because of the Company's Energy Balancing Account. However, since the Company no longer has an EBA, a fifth category has been added for energy costs.

After the TFP case was filed in 1982, the Utah PSC was not sure of it's authority under law to adopt a form of incentive regulation. As a result the issue was taken to the state legislature, but the bill allowing incentive regulation was not passed. A law has since been enacted explicitly giving the Commission authority to adopt incentive regulation methodologies.

Two comments were made with regard to TFP. First, Sam Swanson commented, based upon his experience in New York, that DSM tends to get lost in a TFP incentive because it is too small. New York is using both TFP and DSM incentives because DSM decisions are small enough that they do not have a major influence on TFP because they do not affect the total company. Second, Rich Collins commented that TFP may discourage DSR because DSR may increase costs while decreasing kWh sales, increasing the numerator and decreasing the denominator used in some TFP calculations. This may create a disincentive to investing in DSR.

#### **4.27.4 DSR Performance Standards Subcommittee Report**

Minutes of the April 6 subcommittee meeting were handed out (See *Attachment 5*). Becky Wilson was not in attendance, therefore there was minimal discussion of the minutes. A comment was made that there needs to be a better tie between goals in RAMPP and the DSR program goals.

#### **4.27.5 Statistical Recoupling Subcommittee Report**

The statistical recoupling subcommittee April 26 minutes are included as *Attachment 6*. They will be doing four analyses; total company, residential, commercial and industrial. In the meeting on April 26, Paul Wrigley gave the subcommittee sample inputs, and graphs of key data.

Several questions were discussed. The first concerns Item 2.d. in the attached minutes concerning what would happen when actual sales are within the confidence interval of the statistical model. Would there be an adjustment or not?

Another item of discussion is what would happen if forecasted sales were less than actual sales. The answer would somewhat depend on the objective of statistical recoupling. Is the objective to measure lost revenues, or to measure the Company's performance against specific goals. If the objective is to measure lost revenues, then forecasted sales should not be less than actual sales.

#### 4.27.6 Other Business

The question was raised about how the DSRCRC final report would be organized. It was decided that each of the subcommittees would submit a final report to the DSRCRC for comments. The DSRCRC will then write a final report, based on the subcommittee reports to the extent possible, with the subcommittee reports included as appendices. All members will be allowed to comment on the final reports, and dissenting opinions will be included if needed.

Item Closed.

**DEMAND SIDE RESOURCE COST RECOVERY COLLABORATIVE**  
**ATTENDEES**  
 April 27, 1994

| Name             | Organization                         | Telephone    |
|------------------|--------------------------------------|--------------|
| Sam Swanson      | Land & Water Fund                    | 303-444-1188 |
| Brad Markus      | Mountain Fuel Supply                 | 801-534-5631 |
| Jeff Millington  | Mountain Fuel Supply                 | 801-534-5010 |
| Kevin Duffy-Deno | Office of Energy & Resource Planning | 801-538-5428 |
| Pete Catching    | PacifiCorp                           | 503-464-5099 |
| Bob Lively       | PacifiCorp                           | 801-220-4052 |
| Steve McDougal   | PacifiCorp                           | 801-220-4986 |
| Dave Taylor      | PacifiCorp                           | 801-220-2947 |
| Mary Cleveland   | Utah Committee of Consumer Services  | 801-530-6957 |
| Dan Gimble       | Utah Committee of Consumer Services  | 801-530-6798 |
| Ron Burrup       | Utah Division of Public Utilities    | 801-530-6686 |
| Mark Flandro     | Utah Division of Public Utilities    | 801-530-6788 |
| Ken Powell       | Utah Division of Public Utilities    | 801-530-6664 |
| Rich Collins     | Utah Public Service Commission       | 801-530-6770 |
| Ellen Eckels     | Wasatch Clean Air Coalition          | 801-277-6664 |

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**DSR Cost Recovery Collaborative  
Minutes of the Evaluation and Net Lost Revenue Subcommittee**

March 23, 1994

9:30 am

Room 857, One Utah Center

**Attendees:** Rich Collins - PSC, Becky Wilson - CCS, Ron Burrup - DPU, Mark Flandro - DPU, Eric Blank - Law Fund, Chris Fisher - PacifiCorp, Steve McDougal - PacifiCorp, Bob Lively - PacifiCorp

**Minutes from the February 16th Sub-Committee meeting:** Draft minutes from the February 16th Sub-Committee meeting were reviewed. With several suggested changes the minutes were adopted.

**February Net Lost Revenue Calculation:** The calculation of NLR for conservation measures installed in February was and discussed. Installed measures in January and February have been low. This is due in part to the fact that much of the "pipeline" for conservation measures was depleted in December as Program Managers and Account Reps. pushed to meet their 1993 conservation goals. In addition criteria for determining when measures are considered installed have been tightened up. Installed measures are expected to increase as the year progresses. Also presented and discussed were three sensitivity analysis based on (1) avoided energy costs, (2) avoided demand costs, and (3) alternative levels of conservation load factors. The avoided energy cost was shown to be the most sensitive variable of those examined. It was discussed that the calculation of NLR at this point is based on engineering estimates and deemed savings. As program measurement and evaluation occurs these estimates will be updated through 1994. It was suggested that the consultant should provide an opinion of the reasonableness of the Company's estimates of kWh savings. The Sub-Committee made suggestions relative to the format of the monthly NLR report. These suggestions will be implemented in next months report. Also, the Sub-Committee requested diskettes containing the NLR calculations. These will be provided by the Company.

**Kwh Savings by program by site by measure:** At the request of the Sub-Committee the Company is continuing to investigate it's ability to provide kWh savings by program/site/measure. The information will initially be extracted from various program data bases. However the Company committed to provide a quarterly report of kWh savings by program/location/measure beginning in the next Sub-Committee meeting.

**Avoided Energy and Demand Cost:** It was suggested that the issue of avoided costs for net lost revenue purposes could be addressed as part of the avoided costs case the Company is preparing to file this year. The Company will schedule a meeting (tentatively April 20th) with Rodger Weaver to discuss the appropriate basis for the avoided energy and demand cost used for NLR purposes. Becky Wilson agreed to distribute some relevant information prior to that meeting and suggested that each Sub-Committee member should come prepared to discuss the appropriate basis for net lost revenue avoided costs.



**Conservation Load Factor:** The conservation load factor is used to calculate the conservation non-coincident peak for purposes of demand net lost revenue. A brief description of the calculation of the conservation load factor was given. The calculation is basically the change in kWh from conservation over the change in kW from conservation. The lower the conservation load factor (ie. 48% vs. 60%) the greater the impact on the system peak. The conservation load factor for water heater measures is 48% due in part to the fact that the Company's daily load curve is at its peak in the morning when showers usually occur. Thus much of the kWh savings from water heat measures occurs on peak. The Company is in the process of reexamining and documenting its conservation load factors based on RAMPP III data. When this process is complete the Company will schedule a presentation of the results to the Sub-Committee.

**Consultant Contract:** A draft of the contract with the consultant was reviewed. It was determined that the steering committee for purposes of the consultant contract would consist of a representative of the DPU, the CCS, and the Company. Comments on the contract are to be returned to Tim Hunter by March 25th. Bob Lively, Mark Flandro, and Pete Catching are to work with Xenergy to draft a detailed work plan which will be attached to the contract.

**Schedule for Evaluation Plan:** Program Evaluation plans are to be provided by the Company by the end of April. These plans will be reviewed by the Sub-Committee and the Consultant. The Consultant will provide his review of the plans by the end of May.

**Survey of Schedule 5 Customers:** The Company sent an energy survey to Schedule 5 Customers on March 18th. If the customers return the survey by May 2nd they will receive a conservation showerhead/sink aerator kit. The information from the survey will be used to determine the actions the Company should take to ease the transition of customers from schedule 5 to schedule 1. In response to questions raised in the previous meeting about the Company's ability to identify each survey returned to a customer account number, the Company reported that each survey is pre-printed with the customers name, address and account number.

**ECONS evaluation:** The Company reported that the measurement of savings from ECONS installations is continuing and that the Company will issue its report to the Sub-Committee in the first week of May.

**Division of Energy:** In the February 16th Sub-Committee meeting Becky Wilson suggested that engineers from the Office of Energy & Resource Planning could be used to do spot verification of measures installed under DSR programs to insure that the measures are properly installed and functioning correctly. Becky Wilson investigated this possibility and reported that the Office of Energy & Resource Planning was willing to do the spot verification. Becky will draft a memo to the Energy Office confirming the agreement to perform spot verifications of installed DSM measures

**Next Meeting:** The next meeting will be held on April 27th at 8:30 a.m. in Room 857 of the One Utah Center.

# Minutes of the Rate Spread & Non-Participant Impact Subcommittee

*April 21, 1994 Meeting*

Attendees: Lowell Alt  
Ron Burrup  
Mark Flandro  
Dan Gimble  
Craig Johnson  
Jim Logan  
Dave Taylor

## Discussion

Reviewed the minutes of the last meeting. Dan Gimble presented a summary of how DSR costs are allocated in other jurisdictions. Dan identified three major approaches to cost allocation. 1. Costs are allocated to all customer classes, typically on the basis of a uniform energy or kwh charge. A conservation rider might be attached to base rates to collect revenues. 2. DSR costs are allocated to customer classes that are either eligible to participate in a given DSR program or are perceived to be beneficiaries. 3. Costs are allocated, as if the investment were a supply-side resource, on the basis of cost causation (a particular class' contribution to either energy or peak demand) or class revenues. Approaches one and two were the most common. Comments were also given regarding revenue recovery methods such as the energy service charge and decoupling.

The discussion then turned to the relative advantages and disadvantages of each cost allocation approach.

### 1. A uniform energy charge.

**Advantages:** A uniform energy charge is easy to calculate. If it is shown on the bill as a separate rider, customers are aware of how much they are paying for DSR.

**Disadvantages:** A uniform energy charge does not follow cost causation principles. All DSR costs are classified as energy related. As such, the energy charge assigns a disproportionate share of the costs to high load factor customers. Direct beneficiaries (participants) and indirect beneficiaries pay the same uniform energy charge.

2. Cost allocated to customer classes that are eligible to participate:

Advantages: Allocation of DSR costs to participating or beneficial customer classes is an effort to better match program costs and benefits. The allocation calculations are relatively straightforward.

Disadvantages: Program participants will likely see net bill reductions, while bill increases to non-participating customers within the class can be even greater than if costs were allocated to all customer classes. Cost causation principles are ignored. Indirect beneficiaries are allocated none of the costs.

3. Allocating DSR costs in the same manner as SSR

Advantages: This method follows the principles of cost causation. It assumes that all customers benefit because new Supply Side Resources are avoided

Disadvantages: Determining how much of the DSR investment is demand or energy related can seem arbitrary. Direct beneficiaries (participants) and indirect beneficiaries are allocated the same level of costs.

The committee noted that allocation of DSR costs remains unresolved in many jurisdictions. There doesn't yet seem to be a consensus. Perhaps not all alternatives have been imagined and explored.

An alternative method of DSR cost allocation was bantered about. The idea is that DSR costs at or below the RIM threshold benefit all customers, while costs above RIM benefit a specific customer or customer class. Using this thesis, DSR costs equal to the RIM threshold could be allocated to all customer classes and costs above RIM could be assigned more directly. The committee seemed to think this alternative merits further evaluation.

PacificCorp's 1993 DSR investment and kwh savings by program in Utah were distributed. The cost effectiveness of each program is yet to be calculated.

## Assignments

For the next meeting, Craig Johnson and Dave Taylor will make a first attempt to allocate the 1993 DSR costs to customer classes using the methods discussed above.

## Next Meeting

May 19th at 10:00 in room 857 of the One Utah Center.

REPORT NUMBER 3 OF THE  
SHARED SAVINGS AND TOTAL FACTOR PRODUCTIVITY  
SUB-COMMITTEE

April 27, 1994

Last Sub-Committee Meeting: 10:00 AM April 15, 1994

Next Sub-Committee Meeting: 10:00 AM May 12, 1994, at the DPU offices

Members: Ken Powell, Steve McDougal, Mark Flandro, Dan Gimble, Ron Burrup

ITEMS DISCUSSED

1. The sub-committee discussed the principal issue before them: Are incentives needed to encourage PacifiCorp to implement its IRP?

The sub-committee discussed the positions of all parties on incentives as stated in the August, 1993 Demand-Side-Resource Collaborative Report. The parties present represented that their positions had not changed. The sub-committee members agreed to the following position statement: If PacifiCorp has an opportunity to receive a fair return on its DSR investments (including NLR and DSM associated costs), an incentive program is not necessary. However, without this opportunity, an incentive program may be necessary. The sub-committee chairperson will begin to draft the sub-committee's report to the PSC detailing parties positions and reasoning supporting this statement.

The members also agreed to address which incentive mechanism is most appropriate for PacifiCorp's Utah jurisdiction on two fronts. If the Commission decides that an incentive mechanism is needed in addition to a fair return on DSR investment, the incentive should be small, and should be shared savings based. If a fair return on DSR investment is not allowed, the incentive mechanism should be larger to equalize SSR and DSR investments. The sub-committee will therefore recommend two alternative size incentive mechanisms. The sub-committee also agreed to address if a shared savings incentive should be grossed up for taxes.

2. The sub-committee reviewed two summaries of different NARUC state survey's on DSR cost recovery mechanisms. Most states have implemented shared savings mechanisms. Dan Gimble expressed interest in the District of Columbia's shared savings approach for PEPCO. The committee agreed that the most appropriate incentive mechanism for PacifiCorp's Utah jurisdiction is a shared savings mechanism. The sub-committee chairperson will begin drafting the sub-committee's report stating why the sub-committee selected this incentive mechanism.

The sub-committee generally agreed with the California commission's principles for shareholder incentive mechanisms. The principles state: a) utilities

should be provided comparable opportunity for earnings from prudent investments in both demand-side and supply-side resources; b) rate of return on DSM programs should be no greater than shareholder rate of return on supply-side alternatives; c) incentive mechanisms should be based on shared-savings approach where savings can be reasonably estimated; e) incentive mechanisms should include threshold and penalty features; and f) load-building/retention programs should not be eligible for incentives.

The sub-committee agreed on several threshold questions to address. They are: a) Should the reward/penalty mechanism be symmetrical or asymmetrical? b) What should be the magnitude of a reward/penalty? c) What formula should be used to calculate the reward/penalty? Should a Utility Test or TRC test be used to measure the benefit? d) Should a dead-band be used before rewards or penalties are applied?

3. The sub-committee decided the TFP model needed additional refinement to further normalize historical data and adjustment for inflation indices before establishing a trend line for 1993. The DPU will work with the Company on this.

### TASK ASSIGNMENTS

- A. The Division will draft a document discussing the decisions reached. The goal is for this document to become part of the Sub-Committee report to the PSC. One week prior to the next meeting this draft will be circulated to sub-committee members so that it can be discussed at the next meeting.
- B. The Division and the Company will continue to work on the TFP model using historical results to establish trend lines for 1993.

**DSR Cost Recovery Collaborative  
Performance Standards Subcommittee**

**Draft Minutes for April 6, 1994 Meeting**

**MEMBERS:** Pete Catching, Mary Cleveland, Rich Collins, Dan Gimble, Bob Lively, Becky Wilson.

**ATTENDEES:** Ron Burrup, Mary Cleveland, Rich Collins, Mark Flandro, Bob Lively, Becky Wilson.

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**NEXT MEETING: May 11, 1994 at 2:00 pm in Ron Burrup's Office**

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**Changes to minutes for March 9, 1994 meeting:** No changes.

**Review and finalize mission statement:** The mission statement now reads:

*To recommend to the Commission the adoption of consistent methods and standards by which demand side resource acquisitions are determined to be in the public interest. To this end, we will define and recommend DSR performance standards which employ consistent methods and that provide guidelines for the Company and Regulators for integrated resource planning, DSR program approval, evaluation and cost recovery purposes.*

**Review Scope of Work: Revise, set timetable, assign tasks**

The scope of work was revised to address the fact that cost-benefit analysis is conducted on programs at four different stages of DSR development: 1) IRP; 2) Tariff or Contract Approval; 3) Evaluation, and; 4) Cost Recovery.

The scope of work was also revised to include a review of the Company's cost-effectiveness equations and assumptions at each of the first three stages noted above as well as to survey how commissions around the country have constructed the equations and assumptions, and how they are used at each or any stage. The revised scope of work is attached.

At our next meeting, Pete and Bob will present the details of the Company's cost-effectiveness equations and assumptions at the IRP stage.

Rich and Becky will present a draft of a survey form to gather data on TRC, et al., equations and performance standards in use in other states.

## Scope of Work

1. Investigate RAMP-3 (IRP) equations and assumptions for computing PC, UC, RIM and TRC:
  - (i) Analyze avoided cost computations including use of 10% adder and conservation load factor assumption;
    - (ii) Examine cost, energy savings, market penetration and engineering assumptions, tax treatment;
    - (iii) Examine impact of three "financial standards" on amount of DSR goal.
2. Investigate DSR tariff or contract equations and assumptions for computing PC, UC, RIM, and TRC:
  - (i) Analyze avoided cost computations including use of 10% adder and conservation load factor assumption;
    - (ii) Examine cost, energy savings, market penetration and engineering assumptions, tax treatment.
3. Investigate DSR evaluation report equations and assumptions for computing PC, UC, RIM, and TRC:
  - (i) Analyze avoided cost computations including use of 10% adder and conservation load factor assumption;
    - (ii) Examine cost, energy savings, market penetration and engineering assumptions, tax treatment.
4. Review cost-effectiveness methods and performance standards available and/or in current use by commissions throughout the country; identify at which stage the analysis is conducted.
  5. Analyze the trade-offs of impacts on differing perspectives, interaction of perspectives, balance of impacts, possible weights, use of proxy values for uncertain values.
  6. Examine the employment of DSR "targets" to assess achievement of kW, kWh and budget expenditure.
  7. Define terms and conditions for application of performance standards. Should DSR acquisition be reviewed in the aggregate or by program? Should developmental stage of the program affect adherence to the standards?
  8. Establish content of cost-benefit equations for use in Utah at each of the four stages of DSR program development and propose performance standards for each stage.
  9. Final report to Commission providing conclusions and recommendations.

**DSR Cost Recovery Collaborative  
Statistical Recoupling Subcommittee**

April 27, 1994

Last Meeting: April 26, 1994

**Items Discussed**

1. Theory Behind Statistical Recoupling

a. Link Between SR and Net Loss Revenue Calculation

Group not clear on linkage. Fuller discussion will take place at next meeting with Eric Blank (who was unable to attend the 4/26 meeting).

b. How SR Would Work in Practice

Ron Burrup offered to present a paper on this topic at the next meeting.

c. Motivation Behind SR

Dave Taylor argued that SR seeks to obtain 2 objectives: (i) discourage "unacceptable" load building; and (ii) remove disincentive for DSM projects. The specification of the model essentially determines "acceptable" load building. What is "acceptable" for the Company may not be "acceptable" for regulators.

2. Modeling and Statistical Issues

Kevin Duffy-Deno gave an overview presentation on the SR methodology and some modeling and statistical issues. Highlights:

a. SR relies on an unconditional forecast of sales (KWh) and compares the forecasted value with actual sales. If actual < forecasted, the difference is attributed to DSM and a revenue adjustment is made for the next year.

b. Forecast model is essentially an equation describing the demand for KWh. Demand is a function of price, income, number of customers, price of substitute energy, weather, and time. Four (4) models will be estimated: total sales, residential, commercial, and industrial.

c. Objective is to find a model that "fits" historical data as closely as possible. This may be difficult for commercial and industrial sectors.



d. Important issue not addressed to date is whether actual sales differs **significantly** from forecasted sales. If actual sales > forecasted sales but the difference is not statistically significant, then should any adjustment be made?

e. Statistical shortcomings of SR methodology to date: (i) statistical "gray" area around the forecasted sales; (ii) forecast model is a good predictor of the future as long as the future is essentially like the past.

3. Data

Paul Wrigley presented graphs of the key data. Data sample is quarterly UPL data from 1978:1 to 1993:4. Paul also presented some estimated equations to give the group a flavor of things to come.

4. Next Meeting

In order to give Kevin and Paul time to work on estimating models, it was decided to have the next meeting on June 28, 1994 at 1:30, Room 857 Utah One.